

## Interpreting Laboratory Test Results

A laboratory test is a medical procedure that involves testing a sample of blood, urine, or other tissues or substances in the body. Such tests have a variety of uses. They are often used as part of a routine checkup to identify possible changes in a person's health before any symptoms occur. Laboratory tests also play an important role in diagnosis when a person has symptoms. In addition, tests may be used to help plan a patient's treatment, evaluate the response to treatment, or monitor the course of the disease over time.

Laboratory test samples are analyzed to determine whether the test results fall within normal ranges. They also may be checked for changes from previous tests. Normal test values are usually given as a range, rather than as a specific number, because normal values vary from person to person. What is normal for one person may not be normal for another person. Many factors (including the patient's sex, age, race, medical history, and general health) can affect test results. Other factors that sometimes affect test results include specific foods, drugs the patient is taking, how closely the patient follows preparatory instructions, and variations in laboratory techniques. It is also common for normal ranges to vary somewhat from laboratory to laboratory.

Some laboratory tests are precise, reliable indicators of specific health problems while others provide more general information that simply gives doctors clues to possible health problems. Information obtained from laboratory tests may help doctors decide whether other

tests or procedures are needed to make a diagnosis or to develop or revise a previously diagnosed patient's treatment plan. All laboratory test results must be interpreted in the context of the overall health of the patient and are generally used along with other exams or tests. The doctor who is familiar with the patient's medical history and current condition is in the best position to interpret that person's test results and explain their implications. Patients are encouraged to discuss questions or concerns about laboratory test results with the doctor.

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### **Sources of National Cancer Institute Information**

#### **Cancer Information Service**

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

#### **NCI Online**

##### ***Internet***

Use <http://www.cancer.gov> to reach NCI's Web site.

##### ***CancerMail Service***

To obtain a contents list, send e-mail to [cancermail@icicc.nci.nih.gov](mailto:cancermail@icicc.nci.nih.gov) with the word "help" in the body of the message.

#### **CancerFax® fax on demand service**

Dial 301-402-5874 and listen to recorded instructions.

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